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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/990,507	11/21/2001	Kostas F. Dockus	60,680-559	3423

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EXAMINER

ZIMMERMAN, JOHN J

ART UNIT

PAPER NUMBER

1775

DATE MAILED: 08/11/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

42-9

Office Action Summary

Application No.

09/990,507

Applicant(s)

DOCKUS ET AL.

Examiner

John J. Zimmerman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on June 2, 2003 (election).
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-56 is/are pending in the application.
- 4a) Of the above claim(s) 1-34 and 54-56 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 35-44 and 47-53 is/are rejected.
- 7) ☒ Claim(s) 45 and 46 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 November 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4&8. 6) ☐ Other:

OFFICE ACTION

Election/Restrictions

1. Pending claims 35-53 will be examined on their merits in the prosecution of this application. Claims 1-34 and 54-56 have been withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made without traverse in Paper No. 7, received June 2, 2003.

Information Disclosure Statement

2. The Information Disclosure Statement received as Paper No. 4 on March 7, 2002 and the Information Disclosure Statement received as Paper No. 8, on June 2, 2003, have been considered. Initialed forms PTO-1449 are enclosed with this Office Action.

Claim Objections

3. Claims 40-43 are objected to because of the following informalities: Applicant should insert "further" before "comprises" in claims 40 and 41, since the independent claim already requires that the bond promoting layer is nickel, cobalt or iron. It is suggested that applicant remove the "preferably" clauses in claims 42 and 43 since the "preferably" clauses are extraneous and because for the purposes of claim interpretation, the claims will only be interpreted by the broader thickness limitations that precede these clauses. Appropriate correction is requested.

Claim Rejections - 35 USC § 101

4. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

5. Claim 52 is rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any active steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claim 52 provides for the use of a brazing preform, but, since the claim does not set forth any active steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

9. For the purpose of claim interpretation in following rejections of the pending claims, the use of "up to" (e.g. claim 49) is interpreted to read on zero amounts of a constituent, *In re Mochel*, 176 USPQ 194 (CCPA 1974). Also, when there is a substantially similar product, as in the applied prior art, the burden of proof is shifted to the applicant to establish that their product is patentably distinct not the examiner to show that the same process of making (e.g. see method recitations in claim 53/6), see *In re Brown*, 173 U.S.P.Q 685, and *In re Fessmann*, 180 U.S.P.Q. 324. Regarding listing the individual layers as "braze-promoting" or "bonding" layers, prior art layers having the same compositions would inherently function in the same manner regardless of recognition of their use for the recited purposes, *In re Spada*, 15 USPQ2d 1655 (Court of Appeals, Federal Circuit 1990); *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963). In addition, although it is noted that some applied references

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only add bismuth or lead in the comparative examples, all the disclosures in a reference must be evaluated for what they fairly teach one of ordinary skill in the art even though the art teachings relied upon are phrased in terms of a non-preferred embodiment or even as being unsatisfactory for the intended purpose, *In re Boe*, 148 USPQ 507 (CCPA 1966); *In re Smith*, 65 USPQ 167 (CCPA 1945); *In re Nehrenberg*, 126 USPQ 383 (CCPA 1960); *In re Watanabe*, 137 USPQ 350 (CCPA 1963).

10. Claims 35-43 and 47-53 are rejected under 35 U.S.C. 102(b) as being anticipated by Research Disclosure 439070 (published anonymously on November 2000).

11. Research Disclosure 439070 discloses an aluminum fluxless brazing sheet having a layer of tin or zinc of a thickness of up to 0.5 μm and a nickel braze-promoting layer (containing lead or bismuth) of a thickness of up to 2.0 μm (e.g. see page 1, right hand column; page 2, bottom of left hand column). The substrate has an aluminum core and an aluminum cladding layer containing between 2-18 wt.% silicon (e.g. page 1, left column, third full paragraph). The clad layer can have Bi, Li, Sb or Mg added for better results (e.g. see page 1, right column, fourth full paragraph).

12. Claims 35-44 and 47-53 are rejected under 35 U.S.C. 102(e) as being anticipated by Wittebrood (U.S. Patent 6,391,476).

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13. Wittebrood '476 discloses an aluminum fluxless brazing sheet having a layer of tin or zinc (which can comprise up to 50% lead or bismuth; e.g. column 6, lines 7-11) of a thickness of up to 0.5 μm (e.g. column 5, lines 19-27) and a nickel braze-promoting layer (which can contain lead or bismuth; e.g. see column 5, lines 63-67) of a thickness of up to 2.0 μm (e.g. column 5, lines 41-50). The substrate has an aluminum core and an aluminum cladding layer containing between 2-18 wt.% silicon (e.g. column 3, line 31). The clad layer can have Bi, Pb, Mg, Li and Sb added for better results (e.g. see column 3, lines 41-49).

14. Claims 35-40, 42-43 and 47-53 are rejected under 35 U.S.C. 102(e) as being anticipated by Wittebrood (U.S. Patent 6,383,661).

15. Wittebrood '661 discloses an aluminum fluxless brazing sheet having a layer of tin or zinc (e.g. column 6, lines 55-58) of a thickness of up to 0.5 μm (e.g. column 5, lines 46-50) and a nickel braze-promoting layer (which can contain bismuth) of a thickness of up to 2.0 μm (e.g. column 4, lines 60-63). The substrate has an aluminum core and an aluminum cladding layer containing between 2-18 wt.% silicon (e.g. column 7, lines 17-25).

16. Claims 35-44 and 47-53 are rejected under 35 U.S.C. 102(a) as being anticipated by Wittebrood (U.S. Patent Application Publication 2001/0040180 A1).

17. Wittebrood '180 discloses an aluminum fluxless brazing sheet having a layer of tin or zinc (which can contain up to 50% Pb, Bi, Li or Sb; e.g. see paragraph [0032]) of a thickness of

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up to 0.5 μm (e.g. see paragraph [0025]) and a nickel braze-promoting layer (which can contain bismuth or lead; e.g. see paragraph [0030]) of a thickness of up to 2.0 μm (e.g. see paragraph [0028]). The substrate has an aluminum core and an aluminum cladding layer containing between 2-18 wt.% silicon (e.g. see [0037]-[0038]). The clad layer can have Bi, Pb, Mg, Li and Sb added for better results (e.g. see paragraph [0016]).

18. Claims 35-43 and 47-53 are rejected under 35 U.S.C. 102(e) as being anticipated by Wittebrood (U.S. Patent Application Publication 2002/0012811 A1).

19. Wittebrood '811 discloses an aluminum fluxless brazing sheet having a layer of zinc of a thickness of up to 0.5 μm (e.g. see paragraph [0036]) and a nickel-bismuth or nickel-lead braze-promoting layer of a thickness of up to 2.0 μm (e.g. see paragraphs [0025], [0071]). The substrate has an aluminum core and an aluminum cladding layer containing between 2-18 wt.% silicon (e.g. see [0055]).

20. Claims 35-43 and 47-53 are rejected under 35 U.S.C. 102(e) as being anticipated by Wittebrood (U.S. Patent 6,596,413).

21. Wittebrood '413 discloses an aluminum fluxless brazing sheet having a layer of tin or zinc (e.g. column 6, lines 39-52) of a thickness of up to 0.5 μm (e.g. column 7, lines 15-22) and a nickel braze-promoting layer (which can contain lead or bismuth; e.g. see Table 2) of a thickness of up to 2.0 μm (e.g. column 6, lines 29-38). The substrate has an aluminum core and an

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aluminum cladding layer containing between 2-18 wt.% silicon and the clad layer can have Bi, Pb, Mg, Li and Sb added for better results (e.g. see column 5, lines 11-43).

22. Claims 35-43 and 47-53 are rejected under 35 U.S.C. 102(e) as being anticipated by Wittebrood (U.S. Patent 6,503,640).

23. Wittebrood '640 discloses an aluminum fluxless brazing sheet having a layer of tin or zinc of a thickness of up to 0.5 μm (e.g. column 4, lines 63-67) and a nickel braze-promoting layer (which can contain lead or bismuth; e.g. column 6, lines 27-44; column 9, lines 58-65) of a thickness of up to 2.0 μm (e.g. column 6, lines 14-26). The substrate has an aluminum core and an aluminum cladding layer containing between 2-18 wt.% silicon and the clad layer can have Bi, Pb, Mg, Li and Sb added for better results (e.g. see column 7, lines 1-61).

24. Claims 35-43 and 47-53 are rejected under 35 U.S.C. 102(e) as being anticipated by Mooij (U.S. Patent 6,379,818).

25. Mooij '818 discloses an aluminum fluxless brazing sheet having a layer of tin or zinc of a thickness of up to 0.5 μm (e.g. column 6, lines 22-32) and a nickel braze-promoting layer (which can be nickel, nickel-lead or nickel-bismuth; e.g. see column 5, lines 44-49; Example 4) of a thickness of up to 2.0 μm (e.g. column 6, lines 33-40). The substrate has an aluminum core and an aluminum cladding layer containing between 2-18 wt.% silicon (e.g. see column 6, line 64 - column 7, line 27).

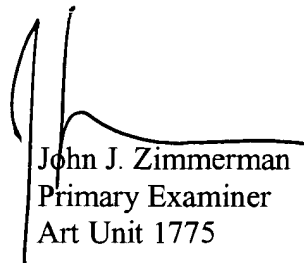
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Allowable Subject Matter

26. Claims 45 and 46 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The prior art of record does not disclose or make obvious the use of a nickel and lead bonding layer with a nickel braze-promoting layer or the use of a tin or zinc bonding layer under a braze-promoting duplex coating comprising an inner layer of lead and nickel or bismuth and nickel combined with a nickel outer layer.

Conclusion

27. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John J. Zimmerman whose telephone number is (703) 308-2512. The examiner can normally be reached on 8:30am-5:00pm, M-F. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.


John J. Zimmerman
Primary Examiner
Art Unit 1775

jjz
August 4, 2003